

CLAIMS

What is claimed is:

1. A method for testing soldering quality, comprising the steps of:
mounting at least one lead having a first color on a printed circuit board (PCB);
5 and
soldering the lead to the PCB and changing the first color of the lead to a second color so as to produce a color difference for determining the soldering quality.
2. The method of claim 1, wherein the lead is incorporated with an electronic
10 component.
3. The method of claim 2, wherein the electronic component is selected from the group consisting of active device, passive device, semiconductor package, and printed circuit board.
4. The method of claim 1, wherein the lead is formed with a soldering portion by a
15 plasma deposition, physical deposition, or chemical deposition technique to be soldered to the PCB.
5. The method of claim 1, wherein the lead is coated with at least one metallic material selected from the group consisting of nickel, nickel alloy, copper, copper alloy, silver, silver alloy, bismuth, bismuth alloy, rhodium, rhodium alloy, ruthenium,
20 ruthenium alloy, zirconium, zirconium alloy, chromium, chromium alloy, titanium, and titanium alloy, to show the first color.
6. The method of claim 1, wherein the lead is coated with at least one colored layer to show the first color.
7. The method of claim 6, wherein the colored layer is made of a chemical dye.
- 25 8. The method of claim 1, wherein melted solder or solder flux is applied on the PCB and covers the lead to show the second color.

9. The method of claim 8, wherein a coloring reagent is added to the melted solder or solder flux.
10. The method of claim 1, wherein the first color is selected from the group of colors consisting of black, dark black, red, yellow, blue, green, orange, and purple.
- 5 11. The method of claim 1, wherein the second color is silver or purplish red.
12. The method of claim 1, wherein the second color is observed with visual inspection, or visualized by irradiation of a specific light source.
13. A method for testing soldering quality, comprising the steps of:
 - connecting at least one connector between two electronic components by
 - 10 projecting leads having a first color of the connector; and
 - soldering the leads of the connector to one of the electronic components and changing the first color of the leads to a second color so as to produce a color difference for determining the soldering quality.
14. The method of claim 13, wherein the leads are coated with at least one metallic
15 material selected from the group consisting of nickel, nickel alloy, copper, copper alloy, silver, silver alloy, bismuth, bismuth alloy, rhodium, rhodium alloy, ruthenium, ruthenium alloy, zirconium, zirconium alloy, chromium, chromium alloy, titanium, and titanium alloy, to show the first color.
15. The method of claim 13, wherein the leads are coated with at least one colored layer
20 to show the first color.
16. The method of claim 15, wherein the colored layer is made of a chemical dye.
17. The method of claim 13, wherein melted solder or solder flux is applied on the PCB and covers the leads to show the second color.
18. The method of claim 17, wherein a coloring reagent is added to the melted solder or
25 solder flux.

19. The method of claim 13, wherein the first color is selected from the group of colors consisting of black, dark black, red, yellow, blue, green, orange, and purple.
20. The method of claim 13, wherein the electronic component is selected from the group consisting of active device, passive device, semiconductor package, and
5 printed circuit board.